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EM Survey - Electromagnetic Services

A electromagnetic survey in the field typically involves the generation of an electromagnetic field into the earth to measure the response of the induced secondary field signal. There are two main types of EM survey methods: time domain electromagnetics (TDEM) and frequency domain electromagnetics (FDEM). TDEM instruments measure the decay time of the induced field signal, whereas the FDEM method measures the amplitude and the phase of the EM signal. EM data is used to determine terrain conductivity and the presence of metal and is capable of detecting both ferrous and non-ferrous materials in the subsurface. This is important in environmental projects, where detecting changes in conductivity and the presence of metal is critical.

THE Applus+ SOLUTION

Applus+ provides clients with professional **electromagnetic surveys in geological exploration** and can facilitate site characterization with real-time results. We are able to use EM survey services in conjunction with other geophysical site survey tools to create a thorough subsurface-investigation package.

Combining EM survey services with complementary services, such as GPR inspection, is often valuable from an environmental perspective.

Clients who partner Applus+ for their electromagnetic services will gain:

- Rapid data acquisition and processing
- The chance to interface directly with GPS for the real-world positioning of results
- Advanced data processing
- A package of complementary geophysical services
- Environmental site assessments
- Engineering support

The geophysicists at Applus+ can design surveys that are tailored to the specific needs of each geophysical site survey, providing timely and accurate data in a professional report.

Target customers

Electromagnetic services and EM surveys provide a fast and reliable way of quickly ascertaining subsurface information. Engineers and construction firms can benefit from an EM survey. Data from the EM survey can help determine the presence of subsurface metal (utilities or underground storage tanks, for example). Our EM services can also include soil conductivity surveys to detect changes in conductivity and changes in subsurface properties, such as water content or subsurface contamination.

Key customer benefits

With its highly trained personnel and the most advanced software on the market, the advanced **electromagnetic** services from Applus+ offer site-characterisation solutions to a range of specialist environmental and engineering problems.

The methods in electromagnetic site surveys deployed by Applus+ allow for rapid and accurate data collection and processing, thereby increasing both the productivity and cost efficiency of our clients' projects.